

REMARKS

Claims 9-13 and 15-19 are all the claims pending in the application. Claims 1-8 and 14 have been canceled without prejudice or disclaimer. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

Miscellaneous Matters

The Examiner did not acknowledge receipt of the priority document. Accordingly, Applicant respectfully requests that the Examiner acknowledge receipt of the certified copy of the priority document as filed on May 28, 2004.

Claim Objections

The Examiner objected to claims 9, 14, and 17, as including informalities. The Examiner noted specific instances of informalities in item 2 on page 2 of the Office Action. Applicant has amended the claims as suggested by the Examiner to overcome this objection.

Claim Rejections- 35 U.S.C. § 103

The Examiner rejected claims 9-17 under §103(a) as being unpatentable over US Publication 2003/0064159 to Motomura (hereinafter Motomura) in view of US Patent 6,010,570 to Motoda et al. (hereinafter Motoda) and US Patent 6,254,682 to Mendiola et al. (hereinafter Mendiola). Applicant respectfully traverses this rejection because the references fail to teach or suggest all of the elements as set forth and arranged in the claims.

The claims, as amended, set forth the feature (which came at least partly from former claim 14) that, for attaching and detaching the substrate to and from the holding means, the holding means turns by a predetermined angle to make the substrate held in an inclined state. Incidentally, in the last portion of the office action, the Examiner asserts that the “predetermined

angle" could be zero¹. To avoid such interpretation, the amended claims set forth that the substrate is held at an "inclined state".

The presently claimed invention is rejected as being obvious over Motomura in view of Motoda and Mendiola. According to the Examiner, Motomura teaches all the features of the invention except for the attachment of the chucking means to the substrate using the holding means as claimed, the feature of claim 10, and the feature of claim 14. The Examiner further states it would be obvious for the person of skill to modify Motomura by introducing attachment of the substrate using a holding means as suggested by Motoda and Mendiola.

Motoda discloses a coating apparatus. It is true that the reference discloses that the substrate is held by chucking so that the surface to be coated faces downward. However all Motoda teaches is the state of the substrate, i.e., holding the surface in horizontal state facing the surface to be coated downward. In other words, there is nothing in Motoda to make the substrate in another state, and there is still less as to the holding means turning into an inclined state for attaching and detaching the substrate, for any possible purpose. Therefore, even if Motoda is combined with the teaching of Motomura, such feature—of inclining the substrate, which is now introduced in the claims—is lacking.

Mendiola teaches treating plate like material that is carried in cassettes for treatment. The reference refers to the use of a vacuum chuck in column 3, lines 3 to 23. Specifically, it states "A vacuum is drawn through the chuck which holds the plate against the chunk and the chuck is rotated 180° so that the surface to be treated is facing downward". However it also states "the use of the vacuum chuck still requires the plates to be individually inverted, and a vacuum to be drawn and released, all of which increases the processing time and the potential for damage to the plates presented by individual handling". In other words, Mendiola expressly points out the inferiority of the use of the vacuum chuck since it requires individual handling

¹ Office action at page 6, lines 1-8.

and, instead, proposes a way for handling the plate-like material in a bulk, for avoiding the inefficiency and potential damage due to the individual handling.

Motomura, the primary reference, teaches coating a film on a substrate, which is obviously performed individually. As far as the coating is carried out for individual substrate, there appears no motive to search for convenience of handling in bulk and to consult Mendiola. Rather, it is just unreasonable for the skilled person to do so. Moreover, it should be noted that Mendiola suggests the inferiority of chucking the substrate, while Motomura does apply chucking. Thus, a skilled person could not reasonably combine the two references to modify Motomura's apparatus. Besides, Mendiola, in suggesting to avoid the use of chucking, teaches away from the present invention.

Moreover, Mendiola again is completely silent as to the claimed feature that the holding means turns to make the substrate held in an inclined state for attaching and detaching convenience, which is now an element of the present independent claims.

In view of the above, it is clear that the combination of the references is not justified and that, even if Motomura could be combined with Motoda and Mendiola, there is still lacking a feature of the presently claimed invention, namely inclining the substrate.

As explained below, this feature of the present invention has significant benefits. As is explained in the specification, a technique of coating on larger sizes of substrates has become necessary in the field of for instance, liquid crystal display devices. When the substrate has a certain size (one side of 300 mm or more, for example) and thus has a certain weight, it is very inconvenient or even dangerous for a worker to handle it in an horizontal state in attaching and detaching it to/from the coating apparatus, especially as the substrate has an untouchable coating surface (regardless of whether the substrate is in a state of being before coating or after coating) in its lower face.

In the meantime, one of the prior arts, which is referred to in the specification, (page 2, line 5 to page 4, line 5), applies a turning mechanism for turning the vacuum chucking plate.

However, according to this method, the subtle undesired fluctuation due to such turning mechanism tends to harm the coating performance, which was found by the present inventors.

By contrast, the present invention employs the holding means having a function of turning for attaching and detaching the substrate, while the substrate during the coating is held by the chucking means, instead of the holding means. Therefore, subtle fluctuation of the holding means due to the turning mechanism, if any, will not affect the coating process. In this manner, both of the superior coating performance and the remarkable opening convenience is achieved by the presently claimed invention. Such advantages are not taught or suggested in any of the references, alone or in combination.

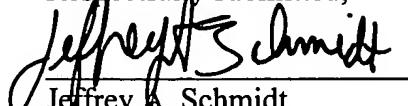
Thus, for at least any of the above reasons, the present invention is patentable over the references applied by the Examiner. Accordingly, Applicant respectfully requests that the Examiner withdraw this rejection.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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